125. STONE WORKING.

10

Examiner.

(No Model.)

2 Sheets—Sheet 1.

T. F. CLEMONS.

STONE TURNING LATHE.

No. 274,563. Patented Mar. 27, 1883.

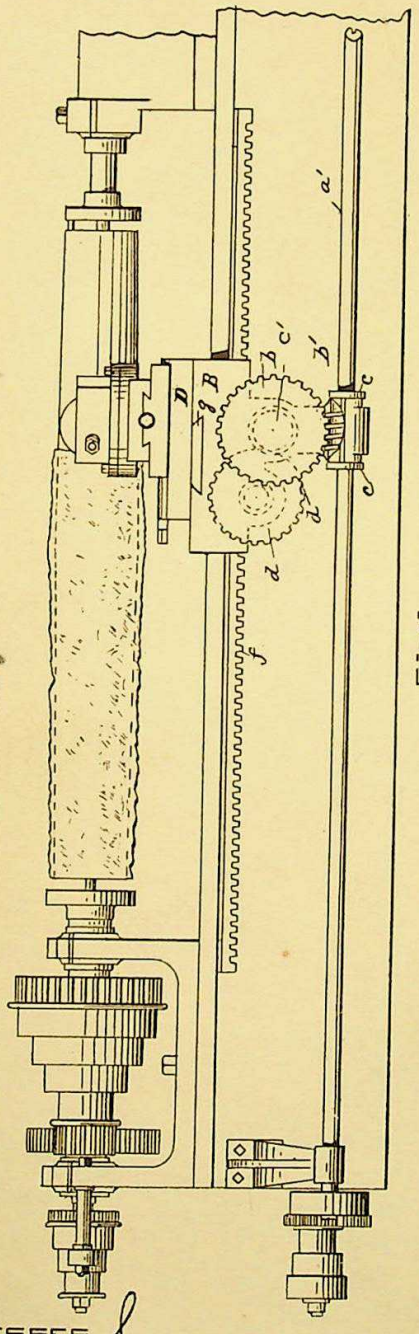

Fig. 1.

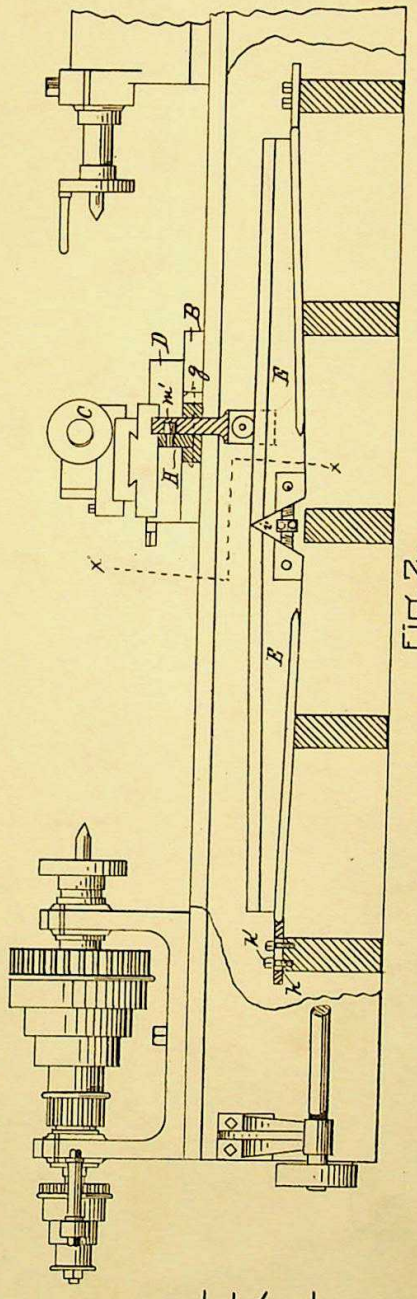

Fig. 2.

274,563. STONE-TURNING LATHE. THOMAS F. CLEMONS, Tiverton County of Devon, England, assignor to A. C. Baldwin, Boston, Mass. Filed Dec. 4, 1882. (No model.)

Brief.—A guide at the base of the machine has an inclination from the center to each end in a vertical plane, which inclination is adjustable. An arm which travels upon this guide has at its upper end a slo inclined in a vertical plane at right angles to the first, in which slot work a pin connected to a horizontally-sliding tool-carriage.

Claim.—1. In lathes for turning tapering columns or shapes of stone or other material, a central guide or pattern bar, the pitch of the incline of which is vertically adjustable, said bar being connected to the cutter-carriage by means of an adjustable arm having a slot therein, the pitch or angle of which slot determines the taper or peripheral outline of the article to be shaped, as set forth.

2. The guide or pattern bars herein described, adjustably connected at their inner ends, said bars being beveled to the frame of the machine at their outer ends, and connected to each other by a right-and-left-hand screw-bolt, by means of which the abutting ends of the bars are raised or lowered, as set forth.

3. The combination of the adjustable guide or pattern bars E E and slotted hanger G, movably connected to said pattern-bars, and adapted to travel back and forth thereon, with the arm H and cutter-carrier D, as set forth.

WITNESSES

Edward F. Randolph

INVENTOR

Thos. F. Clemons

N. PETERS, Photo-Lithographer, Washington, D. C.

126. STONE WORKING.

10

Examiner.

(No Model.) 2 Sheets—Sheet 2.

T. F. CLEMONS.

STONE TURNING LATHE.

No. 274,563 Patented Mar. 27, 1883.

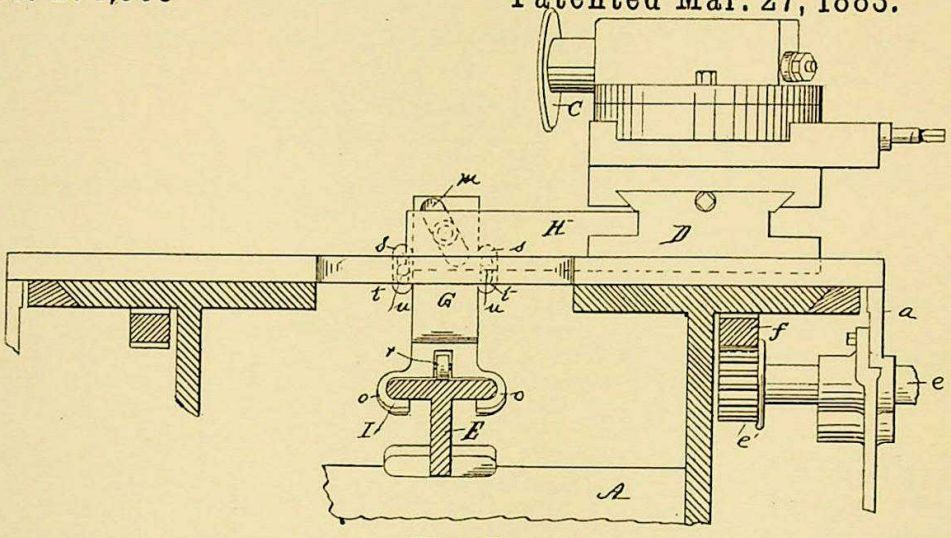

Fig. 3.

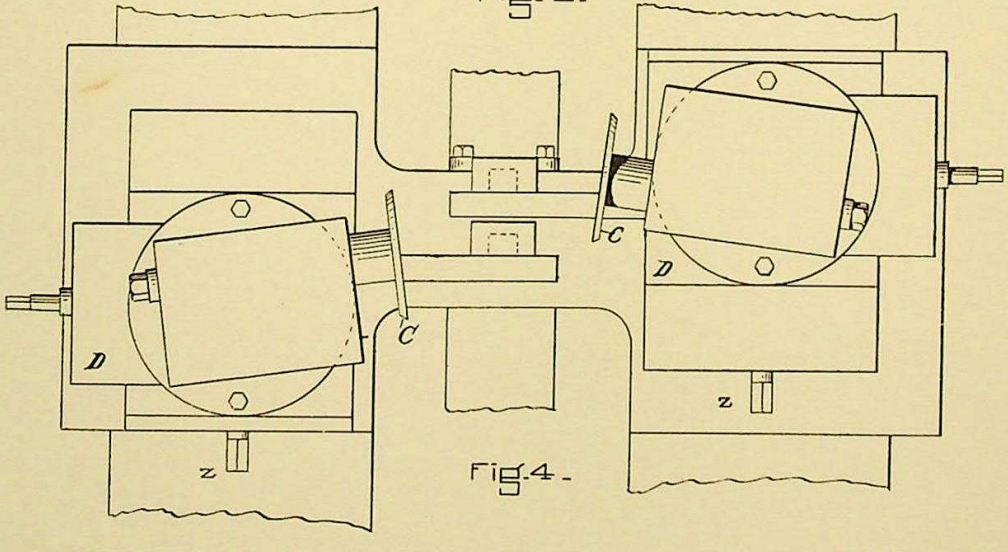

Fig. 4.

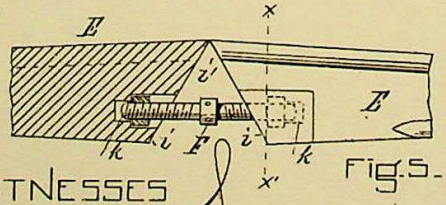

Fig. 5.

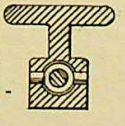

Fig. 6.

WITNESSES

Edward S. Rand

INVENTOR

Thos. F. Clemons

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

THOMAS F. CLEMONS, OF TIVERTON, COUNTY OF DEVON, ENGLAND, ASSIGNOR TO A. C. BALDWIN, OF BOSTON, MASSACHUSETTS.

STONE-TURNING LATHE.

SPECIFICATION forming part of Letters Patent No. 274,563, dated March 27, 1883.

Application filed December 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. CLEMONS, a subject of the Queen of Great Britain and Ireland, residing at Tiverton, in the county of Devon and Kingdom of Great Britain and Ireland, have invented certain new and useful Improvements in Stone-Turning Lathes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in guides or pattern-plates for lathes for turning tapers or forms in stone columns or other material, and is designed as an improvement on the machine shown in Letters Patent No. 265,581, dated October 10, 1882, granted to E. R. Cheney.

The object of my invention is to control both cutter-heads by a single guide or pattern bar running longitudinally through the center of the lathe-bed, said bar being made adjustable, so as to give to the column any desired shape or taper.

My invention consists in an adjustable central guide or pattern bar, to which the cutter-carrying frames are movably secured by a slotted hanger which is carried along by the cutter-carrying frames, whereby the cutters are automatically moved toward or from the stone to give to the stone the required taper or shape.

My invention consists, further, in certain details of construction hereinafter more fully set forth, and pointed out in the claims.

Figure 1 is a side elevation of a portion of a stone-lathe, showing a column and automatic feed device for the cutters and cutter-carrying frames which I prefer to use. Fig. 2 is a longitudinal sectional view, showing the guide or pattern bar. Fig. 3 is a cross-section on the line *x x* of Fig. 2. Fig. 4 is a plan view. Fig. 5 is a sectional view of a portion of the guide or pattern bar partly in section. Fig. 6 is a transverse vertical sectional view on the line *x' x'* of Fig. 5.

In the patent to Cheney, above referred to, a pattern device is shown consisting of three bars or pattern-surfaces of a shape necessary to form two slots or grooves of an equal width throughout, in each of which slots or grooves a roller connected by a bolt or pin to the cutter-head traveled longitudinally, thus moving the cutter-heads toward or from the stone and giving the required shape to the columns. The said bars or pattern-surfaces, being firmly bolted inside of the lathe-bed, were only capable of forming one shape or pattern of column. This, in case of a great variety of column shapes being needed, necessitated the employment of one or more skilled workmen in making pattern-surfaces. The lathe-bed and appliances for revolving the material, as well as for feeding the mechanism to the material to be operated upon, together with the chucks for holding the material, the cutters, and cutter-holders, form no part of my invention, and consequently a full detailed description of these parts is deemed unnecessary, and only so much will be described as will be necessary to describe my improvements as applied to the class of lathe-beds shown in the drawings.

A is a lathe bed or frame provided with the usual chucks for holding the material to be operated upon, and with mechanism for imparting motion thereto. The lathe-bed is provided with a sliding plate, B, which is connected at both ends to operating mechanism by a pendant or arm, *a*, which embraces the grooved rods or shafts *a'*. The pendant *a* is provided with a gear-wheel, *b*, which engages with a worm wheel or gear, *b'*, on the shaft or grooved rods *a'*. The worm wheel or gear *b'* is located within the arms *c c* of the pendant *a*, and is provided with a tongue for engagement with the grooves in the rods or shafts *a'*. The shaft *c'*, on which the gear-wheel is mounted, is provided with a small pinion-wheel, *d*, (shown in dotted lines in Fig. 1,) which meshes with a gear-wheel, *d'*, mounted on a shaft, *e*, which has its bearing in the pendant *a*. The inner end of the shaft *e* is provided with a gear-wheel, *e'*, which meshes with the rack *f* on the lathe-frame, so that by the rotation of the shafts or rods *a'* the plate B is caused to travel back or forth on top of the lathe-bed.

C C are the cutters, secured to appropriate axes, and mounted on adjustable beds D D in such a manner that the cutters may be